

Applicants wish to thank the Examiner, Ms. Linda Salvatore, and her Supervisor, Ms. Cheryl Juska, for the courtesies extended to applicants' representative, Stephen D. Geimer, and Mr. Nick Carter, Director, Global Activities, Polymer Group, Inc., during the telephone conference on June 20, 2002. During this conference, the pending claims were discussed, as were the prior art references cited by the Examiner. Although no agreement was reached as to allowability, it was understood that the claims would be reconsidered in light of the accompanying remarks.

In the Action, the Examiner rejected claims 4 and 5 under 35 U.S.C. §112. These claims have been revised to more particularly identify the manner in which the present fabric can be employed as a nonwoven fabric component of particular types of articles. In the case of an absorbent article, such as a disposable diaper, sanitary napkin, or the like, the present fabric can be advantageously employed as a *topsheet* component. In the case of a protective apparel article, such as a hospital gown or the like, the present fabric can be advantageously employed as a *skin contacting* component of the article. In either of these applications, the desirable tactile properties of the present fabric are advantageously employed. It is respectfully believed that the rejection under 35 U.S.C. §112 can now be withdrawn.

In rejecting the pending claims under 35 U.S.C. §103, the Examiner has relied principally upon U.S. Patent No. 3,454,519, to Hulse, et al., in view of U.S. Patent No. 3,562,291, to Lutzmann et al., and further in view of U.S. Patent No. 3,176,021, to Volungis et al. However, it is respectfully submitted that the present invention is clearly neither taught nor suggested by these references, even when combined, and accordingly, the Examiner's rejection is respectfully traversed.

As set forth in the present claims, the present nonwoven fabric is formed from melt extruded polypropylene, with the polypropylene filaments *thermally bonded* which acts to bond individual ones of the filaments to each other, and consolidates the fabric. As such, the claimed fabric is fundamentally different from typical woven fabric constructions, in which yarns are formed from filaments or fibers, which are then woven to form the fabric construct.

An important distinction between the claimed fabric of the present invention and typical woven fabric constructs is the thermally bonded nature of the present material. By virtue of the thermal bonding, the filaments of the fabric are essentially precluded from relative slippage. This is distinctly different from the woven fabrics of the prior art, wherein yarns of the fabric can readily slip, relative to each other, within the woven fabric structure.

With particular reference to the Hulse et al. patent, it is noted that this patent contemplates use of fatty acid amides with polypropylene fibers or filaments, so as to provide the fiber, or fabric comprised of these fibers, with a self-replenishing surface lubricant. This lubrication acts to "facilitate the freedom of movement of the yarn itself which may, in turn, permit easy recovery to designed, pre-set dimensions" (column 2, lines 3-6).

Thus, Hulse et al. contemplates the use of the fatty acid amide additive to obtain a tactile improvement and a ductile improvement, whereby the ductile improvement is based on the surface lubrication of the component fibers, allowing the resulting yarns the ability to slip or slide against one another.

In contrast, the present invention contemplates the use of the fatty acid amide blend to achieve tactile softness, and a claimed level of ductile softness, in a *thermally bonded* nonwoven fabric construct. As will be appreciated by those skilled in the art, thermal bonding results in no one filament within the plane of the resulting nonwoven fabric having

freedom of movement. It is respectfully submitted that the improved ductile softness, wherein the filaments are significantly constrained by thermal bonding, and cannot freely slip against one another, is neither taught nor suggested by the Hulse et al. reference.

The "Examples" set forth in the present specification illustrate the distinct improvements provided by the polypropylene nonwoven fabric of the present invention. Comparative Example 1 shows that a polyethylene fabric comprising spunbond layers exhibits very good softness, but a lack of smoothness. Examples 1 and 2 show that fabrics formed in accordance with the present invention, comprising spunbond polypropylene layers (ss), and spunbond and meltblown polypropylene layers (sms), exhibited distinctly improved softness and smoothness characteristics when compared to Comparative Examples 2 and 3, polypropylene nonwoven fabrics not having the specified fatty acid amide additives of the present invention. Table II shows the decided decrease in bending resistance achieved by the polypropylene fabrics of the present invention, as exemplified by Examples 1 and 2.


It is respectfully submitted that neither of the secondary Lutzmann et al. or Volungis et al. references overcome the clear deficiencies in the teachings of the principal Hulse et al. patent. Volungis et al. is directed to the use of fatty acid amides in polypropylene *films*, to improve physical characteristics thereof. This includes reduction in film-to-film coefficients of friction (column 1, lines 26-28). This reference clearly does not teach or suggest the use of such additives in a polypropylene resin for improving the bending modulus of a thermally bonded fabric, in accordance with the present invention.

The Lutzmann et al. reference is directed to the use of fatty acid amides in polyolefin resins so as to impart slip to films and the like. There is clearly no teaching or suggestion of

using such additives for use in a polypropylene resin in a thermally bonded nonwoven fabric,  
as claimed.

In view of the foregoing, formal allowance of claims 1-6 is believed to be in order and  
is respectfully solicited. Should the Examiner wish to speak with applicants' attorneys, they  
may be reached at the number indicated below.

Respectfully submitted,

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U.S. Serial No. 09,638,341  
Claims After Amendment

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4. The fabric of claim 1 used as a topsheet component in an absorbent article.
  5. The fabric of claim 1 used as a skin-contacting component in a protective apparel article.
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